

**I CLAIM AS MY INVENTION:**

1. A cartridge for a fluid comprising:
  - a cylindrical tank having an opening adapted to admit and discharge fluid relative to the tank, said tank having a first longitudinal section and a second longitudinal section adjoining said first longitudinal section;
  - a piston movable in a longitudinal direction toward and away from said opening to pump a fluid through the opening into or out of the tank;
  - a connection element adapted to engage an actuator for moving said piston in said longitudinal direction, said connection element being adapted to mechanically interact with said actuation element to produce a positive fit therewith, said connection element being movable back and forth between said first and second longitudinal sections of said tank; and
  - said connection element being forced to interact with said actuator to produce said positive fit when said connection element is in said second longitudinal section and automatically releasing said positive fit when said connection element is in said first longitudinal section.
2. A cartridge as claimed in claim 1 wherein said connection element comprises a connection bushing, and wherein said actuator comprises a connection plunger, said connection bushing and said connection plunger interacting with each other to produce said positive fit when said connection element is in said second longitudinal section.
3. A cartridge as claimed in claim 1 wherein said connection element comprises a catch element and wherein said actuator has a tapering, said catch element engaging said tapering when said connection element is in said second longitudinal section.

4. A cartridge as claimed in claim 1 wherein said tank has a longitudinally open end at a side thereof opposite said opening, and wherein said first longitudinal section conically expands toward said open end.

5. A cartridge as claimed in claim 4 wherein said connection element comprises a catch element and wherein said actuator comprises a tapering, said catch element being permitted by said conically expanding first section to remain out of engagement with said tapering as long as said catch element is at least partially in said first longitudinal section, and said catch element being pressed against said tapering as said connection element is moved in said longitudinal direction into said second longitudinal section.

6. A cartridge as claimed in claim 1 wherein said connection element comprises a catch element and wherein said actuator comprises a tapering engageable with said catch element, said catch element being an elastic catch that, upon movement of said actuator in said longitudinal direction, comes into contact with said actuator at a first point and, upon further movement in said longitudinal direction of said actuator, is elastically pushed away, and first engages said tapering at a second point of said longitudinal movement and, given further movement of said actuator in an opposite direction, remains rigid in said tapering until again reaching said first point.

7. A cartridge as claimed in claim 1 wherein said tank is adapted for handling a medical liquid for examination.

8. A system for handling a fluid, comprising:

a cartridge having a cylindrical tank having an opening to admit and discharge

a fluid, said tank having a first longitudinal section and a second longitudinal section adjacent to said first longitudinal section;

a piston movable in a longitudinal direction in said tank toward and away from said opening to pump the fluid into and out of the opening;

a pump device having an actuator engageable with the piston to move the piston in said longitudinal direction; and

said piston having a connection element that interacts with said actuator so as to be movable thereby between said first longitudinal section and said second longitudinal section, said connection element producing a mechanically positive fit with said actuator when said connection element is in said first longitudinal section of said tank, and automatically releasing said actuator from said connection element when said connection element is in said second longitudinal section of said tank.

9. A system as claimed in claim 8 wherein said cartridge is adapted for handling a medical fluid to be examined.

10. A system as claimed in claim 8 wherein said pump device is adapted to implement a medical examination of the fluid.